

district, I located an equally vast colony of *P. benghalensis* in the dense clumps of *Saccharum bengalense*, hardly 3 km away from the dam, towards the northern side. Hundreds of adult males of *P. benghalensis* were nesting there. They were readily identified by the colouration of their golden-yellow crowns and streakless breasts. In the vicinity of this 'adult colony' I located an approximately 2 ha. area where exclusively yearling cocks were nesting. While observing their nests one by one, I came across a nest of one yearling cock, having no entrance hole. Its upper half was slender but the lower half was massive and spherical. A slight bend was present between the two halves. The fibre used for fabricating the nest was that of *Saccharum bengalense*.

The nest was removed from the clump and cut open. It was noticed that the internal cavity was extremely small. Neither any deposition nor any beautifying material was present inside.

The whole breeding site was surveyed, but no other 'blind' nest was found in the colony. Others were normal though appearing crude.

The tendency of making blind nests is not seen in adult cocks of *P. benghalensis* anywhere in eastern Rajasthan, though it is apparently expressed by adult *P. philippinus* in the area. In the present case it seems likely that making a blind nest by a yearling bird was due to lack of experience in nest fabrication.

April 8, 1990

SATISH KUMAR SHARMA

## 20. SPOTTED MUNIA *LONCHURA PUNCTULATA* (LINN.) FROM DACHIGAM NATIONAL PARK, JAMMU AND KASHMIR

A male specimen of the spotted munia *Lonchura punctulata* was caught during mist netting on 21 June 1989, in Dachigam National Park (34° 96'N, 74° 51'E; alt. 1650 m), Jammu and Kashmir.

Its biometrics were as follows: wing 57 mm, bill 12 mm, tarsus 15 mm, tail 44 mm. It was an adult bird with a developing brood patch. The bird was trapped in a rocky area dominated by medium sized scattered bushes of *Indigofera heterantha* and *Prunus arvenica*, with thin grass cover. The bird was ringed (Ring No. A: 210661) and released. Its distribution is recorded as east of a line roughly joining Madhupur (Jammu), Ludhiana, Sambar Lake, Mt. Abu, southern

Kathiawar, eastwards along the lower Himalayas to Bhutan and Bangladesh and south to Kanyakumari and Sri Lanka. The present record confirms the earlier report of Holmes and Parr (1988, *JBNHS* 85: 465-73) of a singleton from Haigam Rakh, Kashmir. The range of the species may thus be extended northwards to the Kashmir valley.

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January 18, 1991

## 21. AN UPDATED LIST OF BIRD AND BAT SPECIES INVOLVED IN COLLISION WITH AIRCRAFT IN INDIA

The BNHS has been assisting the Indian Air Force and Civil Aviation Ministry by providing identification of bird species involved in collisions with aircraft through examination of bird-strike remnants since 1966. The bird- and bat-strike remnants were identified at BNHS by several researchers, namely D.N. Mathew, Robert B Grubb, Saraswathi Unnithan, Lima Rosalind, S.M. Satheesan and R.J. Pimento.

Bird strike remains obtained from aerodromes were compared with specimens in the BNHS

reference collection. For microscopical examination dry mounts of downy barbs of feathers from remnant samples were compared with similar slides prepared from known species of birds. The techniques given by Brom (1980, 1986), Brom and Buurma (1979), Laybourne (1984, 1986) and Rosalind and Grubb (1987) were used for microscopic studies. In most cases where at least one feather was available intact, the identification was confirmed by comparison with an identical feather from a bird specimen from the BNHS collection. It was not possible to identify birds

down to the species level with microscopic method alone. The findings of Ali and Grubb (1984), Grubb (1988) and Satheesan (1990) were referred to prepare this updated list of bird and bat species involved in collision with aircraft from 1966 to 1989.

□ Sixty seven species of birds and three species of bats were identified from 360 samples of

remnants received from Indian aerodromes after reported collision with aircraft from 1966 to 1989. The species are listed in Table 1.

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March 8, 1990

TABLE 1  
BIRD AND BAT SPECIES INVOLVED IN COLLISIONS WITH AIRCRAFT

	Approx. wt in g	Percentage of incidence (n = 360)
<b>(A) Birds</b>		
1. Pond heron <i>Ardeola grayii</i>	215	0.28
2. Cattle egret <i>Bubulcus ibis</i>	450	1.11
3. Little egret <i>Egretta garzetta</i>	400	0.28
4. Night heron <i>Nycticorax nycticorax</i>	275	0.28
5. Bittern <i>Botaurus stellaris</i>	900	0.28
6. Pintail <i>Anas acuta</i>	700	0.28
7. Common teal <i>Anas crecca</i>	300	0.28
8. Blackwinged kite <i>Elanus caeruleus</i>	270	1.11
9. Pariah kite <i>Milvus migrans govinda</i>	680	20.28
10. Blackeared kite <i>Milvus migrans lineatus</i>	750	0.56
11. Brahminy kite <i>Haliastur indus</i>	600	1.11
12. Sparrow-hawk <i>Accipiter nisus</i>	200	0.28
13. Longbilled vulture <i>Gyps indicus</i>	5000	0.56
14. <sup>a</sup> Whitebacked vulture <i>Gyps bengalensis</i>	4500	20.28
15. Indian scavenger vulture <i>Neophron percnopterus</i>	2000	0.83
16. Montagu's harrier <i>Circus pygargus</i>	250	0.56
17. Pale harrier <i>Circus macrourus</i>	300	0.28
18. Marsh harrier <i>Circus aeruginosus</i>	400	0.28
19. Short-toed eagle <i>Circaetus gallicus</i>	1500-2000	0.28
20. Redheaded merlin <i>Falco chicquera</i>	225	0.28
21. Kestrel <i>Falco tinnunculus</i>	125-150	0.28
22. Black partridge <i>Francolinus francolinus</i>	400	0.28
23. Rain quail <i>Coturnix coromandelica</i>	75	0.56
24. Painted bush quail <i>Perdica erythrorhyncha</i>	80	0.28
25. Indian peafowl <i>Pavo cristatus</i>	4000	0.28
26. Demoiselle crane <i>Anthropoides virgo</i>	2500	0.28
27. Painted snipe <i>Rostratula bengalensis</i>	125	0.28
28. Blackwinged stilt <i>Himantopus himantopus</i>	170	0.28
29. Stone curlew <i>Burhinus oedicephalus</i>	380	1.94
30. Large Indian pratincole <i>Glareola pratincola</i>	125	0.28
31. Small Indian pratincole <i>Glareola lactea</i>	40	0.56
32. Redwattled lapwing <i>Vanellus indicus</i>	190	0.28
33. Yellow-wattled lapwing <i>Vanellus malabaricus</i>	110	0.28
34. Eastern golden plover <i>Pluvialis dominica</i>	103	0.28
35. Gull <i>Larus</i> sp.	116-405	0.28
36. Sooty tern <i>Sterna fuscata</i>	200	0.28

<sup>a</sup>Unidentified vultures (*Gyps* sp.) — 4.44%

	Approx. wt in g	Percentage of incidence (n = 360)
37. Indian sandgrouse <i>Pterocles exustus</i>	250	1.11
38. Yellowlegged green pigeon <i>Treron phoenicoptera</i>	250	0.56
39. Blue rock pigeon <i>Columba livia</i> domestic, feral & wild	300	7.78
40. Ring dove <i>Streptopelia decaocto</i>	130	1.39
41. Red turtle dove <i>Streptopelia tranquebarica</i>	90	0.28
42. Spotted dove <i>Streptopelia chinensis</i>	125	2.5
43. Little brown dove <i>Streptopelia senegalensis</i>	80	0.83
44. Roseringed parakeet <i>Psittacula krameri</i>	120	1.11
45. Koel <i>Eudynamis scolopacea</i>	160	0.28
46. Spotted owl <i>Athene brama</i>	120	0.28
47. Great horned owl <i>Bubo bubo</i>	1100	0.28
48. European nightjar <i>Caprimulgus europaeus</i>	75-100	0.28
49. Swiftlet <i>Collocalia</i> sp.	15	0.56
50. <sup>b</sup> House swift <i>Apus affinis</i>	20	5.28
51. Palm swift <i>Cypsiurus parvus</i>	18	1.39
52. Kashmir roller <i>Coracias garrulus</i>	170	0.28
53. Indian roller <i>Coracias benghalensis</i>	170	0.56
54. Short-toed lark <i>Calandrella cinerea</i>	20	0.56
55. Crested lark <i>Galerida cristata</i>	28	0.28
56. <sup>b</sup> Common swallow <i>Hirundo rustica</i>	18	0.28
57. Indian cliff swallow <i>Hirundo flavicola</i>	9	0.28
58. Redrumped swallow <i>Hirundo daurica</i>	18	1.11
59. Rufousbacked shrike <i>Lanius schach</i>	25	0.28
60. Starling <i>Sturnus vulgaris</i>	60-80	0.28
61. Common myna <i>Acridotheres tristis</i>	110	1.67
62. Pied myna <i>Sturnus contra</i>	75	0.28
63. House crow <i>Corvus splendens</i>	300	1.11
64. Jungle crow <i>Corvus macrorhynchos</i>	500	0.28
65. Bluethroated flycatcher <i>Muscicapa rubeculoides</i>	15	0.28
66. Longtailed warbler <i>Prinia</i> sp.	5-8	0.28
67. House sparrow <i>Passer domesticus</i>	25	0.28
(B) Bats		
68. Indian pigmy pipistrelle <i>Pipistrellus mimus</i>	20	0.56
69. Tomb bat <i>Taphozous</i> sp.	25	0.28
70. Flying fox or giant fruit bat <i>Pteropus giganteus</i>	600	0.56

<sup>b</sup>Unidentified swifts and swallows — 1.39%.

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## 22. GUT CONTENTS OF A MUGGER *CROCODYLUS PALUSTRIS*

The mugger *Crocodylus palustris* is widely distributed in India. A number of workers reported that muggers mostly feed on fish, aquatic beetles, bugs, molluscs, frogs, water snakes, birds, pig, goat and occasionally on human and vegetable matter (Abdulali 1938, D'Abreu 1915, Krishnamurthy 1951, McCann 1935, Simox 1905). We report here on the gut contents of a mugger which escaped from a semi-captive condition at Vanvihar near Dholpur, Rajasthan and died after one year under mysterious circumstances in the Urmila Sagar lake, 3 km from Vanvihar.

On 6 July 1988 we were asked by the officials of the Rajasthan State Forest Department at Dholpur to examine a dead mugger. We found the dead mugger floating in the lake. The total length of the animal was 2.66 m. The right side of the snout was broken, by which it was identified as originating from Vanvihar. The mugger was badly decomposed

by the time we saw it. No external injury was evident. The internal organs were decomposed but we found bones, pieces of carapace and the lower jaw of a softshell turtle, in its alimentary canal. The turtle was indentified as a pond turtle *Lissemys punctata*. The size of the turtle (carapace length) was calculated to be about 20 cm from the carapace pieces. Other gut contents removed from the body were broken portions of water beetle, crab, a few small stones and pieces of aquatic vegetation.

Water bodies in and around Dholpur city have large populations of pond turtles. They become active during monsoon after their long aestivation and during this period they are easy prey to the mugger.

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September 10, 1991

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## 23. UNUSUAL NESTING SITE OF MUGGER *CROCODYLUS PALUSTRIS* IN MADHAV NATIONAL PARK

Sakhya Sagar Lake (25° 26' N, 77° 42' E) is situated in the central zone of Madhav National Park (24° 55' - 25° 55' N and 77° 15' - 78° 30' E) in Shivpuri district of Madhya Pradesh. From the main gate of the central zone, a road runs on the elevated land along the southern bank of Sakhya Sagar, for about 200 m up to

the sailing Club House inside the national park.

In January and February 1991, many holes were dug for tree plantation along this road. The diameter and the depth of each hole were 60 cm. On 15 June 1991, the forest staff saw a crow feeding on some eggs on the road. On investigation, 31 eggs of the